

**Commonwealth of Kentucky
Energy and Environment Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382**

**AIR QUALITY PERMIT
Issued under 401 KAR 52:040**

Permittee Name: Infiltrator Systems, Inc.
Mailing Address: 1315 Enterprise Drive, Winchester, KY 40391

Source Name: Infiltrator Systems, Inc.
Mailing Address: 1315 Enterprise Drive
Winchester, KY 40391

Source Location: 1315 Enterprise Drive

Permit ID: S-07-142R1
Agency Interest #: 812
Activity ID: APE20080001
Review Type: Minor Source, Operating, Revision
Source ID: 21-049-00042

Regional Office: Frankfort Regional Office
663 Teton Trail
Frankfort, KY 40601
(502) 564-3358

County: Clark

Application
Complete Date: August 06, 2008
Issuance Date: December 4, 2007
Revision Date: August 22, 2008
Expiration Date: December 4, 2017



**John S. Lyons, Director
Division for Air Quality**

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:040, State-origin permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining other permits, licenses, or approvals that may be required by the Cabinet or other federal, state, or local agencies.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Emission Point 01: 12 Injection Molding Machines

Description:

Injection molding of Virgin and regrind polypropylene pellets into a plastic mold.

Application Emission Points	Max. Throughput (tons/hr)	Control Equipments	Month Commenced
M 04	1.35	Control: Building Enclosure (70%), Cyclone (90%)	11/1995
M 07	1.25	Control: Building Enclosure (70%), Cyclone (90%)	09/2001
1S	0.775	Cyclone (90%)	04/2005
2S	0.775	Cyclone (90%)	04/2005
3S	0.775	Cyclone (90%)	05/2005
4S	0.775	Cyclone (90%)	03/2006
5S	0.775	Cyclone (90%)	06/2006
6S	0.775	Cyclone (90%)	03/2006
8S	0.775	Cyclone (90%)	06/2006
EC 1	0.36	Cyclone (90%)	05/2005
K 09	1.35	Control: Building Enclosure (70%), Cyclone (90%)	06/2008
K 10	1.25	Control: Building Enclosure (70%), Cyclone (90%)	06/2008

Emission Point 02: 2 Rotational Molding Machines and 2 NG Heaters

Description:

Molding of Virgin and regrind polypropylene. The machine makes the plastic ends for the septic lines.

Application Emission Points	Max. Throughput	Control Equipments	Month Commenced
R01	0.275 (ton/hr)	Control: Building Enclosure (70%), Cyclone (90%)	09/2008 (Proposed)
Heater # 1	N.G., 4.405MMBtu/hr	NA	09/2008 (Proposed)
R02	0.275 (ton/hr)	Control: Building Enclosure (70%), Cyclone (90%)	09/2008 (Proposed)
Heater # 2	N.G., 4.405MMBtu/hr	NA	09/2008 (Proposed)

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Emission Point 03: Three Grinding Machines****Description:**

Injection molding of Virgin and regrind polypropylene pellets into a plastic mold

Application Emission Points	Max. Throughput (tons/hr)	Control Equipments	Month Commenced
GRN 01	5.0	Control: Building Enclosure (70%)	07/1998
GRN 02	2.0	Control: Building Enclosure (70%)	05/2002
GRN 03	2.0	Control: Building Enclosure (70%)	12/1995

Emission Point 04: Nine Shredders**Description:**

Raw material (PE, PP and TPO) received in the form of parts, film, and fiber is processed through shredders, grinders and extruded into pellets.

Application Emission Points	Max. Throughput (tons/hr)	Control Equipments	Month Commenced
SHR 1	10.0	Control: Building Enclosure (70%)	08/2000
SHR 2	3.5	Control: Building Enclosure (70%)	08/1996
SHR 3	3.5	Control: Building Enclosure (70%)	08/1996
SHR 4	2.4	Control: Building Enclosure (70%)	09/1999
SHR 5	0.5	Control: Building Enclosure (70%)	01/2002
SHR 7	3.0	Control: Building Enclosure (70%)	01/2006
SHR 8	4.0	Control: Building Enclosure (70%)	01/2006
SHR 9	5.0	Control: Building Enclosure (70%)	03/2007
SHR 10	3.5	Donaldson Filter (99%)	03/2007

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Point 08: 16 Regrind Silos and 1 rail car load out

Description:

Storage Silos of virgin pellets that are transferred via Railcars, Storage silos of extruded pellets transferred via Transfer Line

Application Emission Points	Max. Throughput (tons/hr)	Control Equipments	Month Commenced
S01	5.0	Cyclone (90%)	05/1994
S02	5.0	Baghouse (99%)	11/1995
S03	5.0	Lid (70%)	11/1995
S04	5.0	Cyclone (90%)	08/1995
S05	5.0	Lid (70%)	11/1995
S06	5.0	Lid (70%)	11/1995
S07	5.0	Lid (70%)	11/1995
S10	5.0	Baghouse (99%)	07/1995
S11	5.0	Baghouse (99%)	10/2001
S12	5.0	Baghouse (99%)	10/2001
S13	5.0	Baghouse (99%)	10/2001
S14	5.0	Baghouse (99%)	10/2001
S15	5.0	Baghouse (99%)	07/1997
S16	5.0	Baghouse (99%)	07/1997
S17	5.0	Baghouse (99%)	07/1997
S18	5.0	Baghouse (99%)	07/1997
RLO	5.0	Bin filter (90%)	07/1997

Emission Point 09: 4 Extruders & 2 Continuous Mixers:

Description:

The machines take recyclables and melt the material to form the plastic pellets that are raw material used in the injection molding machines. Two of the four extruders are equipped with continuous mixers (CM01-).

Application Emission Points	Max. Throughput (tons/hr)	Control Equipments	Month Commenced
EXT 01	2.5	Control: Building Enclosure (70%)	09/1999
EXT 02	2.5	Control: Building Enclosure (70%)	03/1999
EXT 03	4.5	Control: Building Enclosure (70%)	09/2000
EXT 04	2.75	NA	03/2007
CMX 01	2.5	NA	03/2002
CMX 02	2.75	Control: Building Enclosure (70%)	02/2004

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Point 10: Transfer Line Hoppers

Description:

The purpose of this material system is to hold and verify the test results of properties before transfer to the storage silos

Application Emission Points	Max. Throughput (tons/hr)	Control Equipments	Month Commenced
-	2.0	Control: Building Enclosure (70%)	1998

Emission Point 11: Material Handling and Storage (15 Day Bins and 1 Truck Load Out))

Description:

The purpose of this material system is to hold and verify the test results of properties before transfer to the storage silos.

Application Emission Points	Max. Throughput (tons/hr)	Control Equipments	Month Commenced
DB 01-04	4.5	Control: Building Enclosure (70%) Lid (70%)	10/2001
DB 05-08	2.5	Lid (70%)	02/2004
DB 09-12	2.5	Lid (70%)	02/2007
DB 13-15	2.75	Bin Filter (90%)	02/2007
TLO	4.5	Bin Filter (90%)	1998

Emission Point 12: 6 Blending Silos

Description:

The purpose of this material system is to hold and verify the test results of properties before transfer to the storage silos.

Application Emission Points	Max. Throughput (tons/hr)	Control Equipments	Month Commenced
BS-01	7.5	Bin Filter (90%)	02/2002
BS-02	7.5	Bin Filter (90%)	02/2002
BS-03	4.0	Bin Filter (90%)	10/20004
BS-04	4.0	Bin Filter (90%)	10/2004
BS-05	4.0	Bin Filter (90%)	01/2006
BS-06	4.0	Bin Filter (90%)	01/2006

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Emission Point 13: Pellt Melling****Description:**

Application Emission Points	Max. Throughput (tons/hr)	Control Equipments	Month Commenced
CPM 01	2.1	NA	06/2007

APPLICABLE REGULATIONS:

401 KAR 59:010, New Process Operation, is applicable to each affected facility or source, associated with process operations, which are not subject to another emission standard with respect to particulate matter emissions commenced after July 2, 1975.

1. Operating Limitations:

The usage rates of materials used in all affected facilities shall be limited so as not to exceed the emission limitations in Section B (2).

2. Emission Limitations:**(a) *Applicable to EP 01 – 04, EP 09 & EP 11***

401 KAR 59:010, Section 3 (2) limits particulate mass emissions from each affected facility as follows:

For process rates 1,000 lbs/hr or less: $E = 2.34$

For process rates greater than 1,000 lbs/hr up to 60,000 lbs/hr: $E = 3.59P^{0.62}$

Where E = rate of emissions in lbs/hr, and

P = process weight in tons/hr

Compliance Demonstration Method:

The affected facilities are assumed to be in compliance with the particulate mass emissions as long as the affected facilities are operating inside of the building enclosure.

(b) *Applicable only to EP 08, EP 10, EP12 & EP13*

(i) 401 KAR 59:010, Section 3 (2) limits particulate mass emissions from each affected facility as follows:

For process rates 1,000 lbs/hr or less: $E = 2.34$

For process rates greater than 1,000 lbs/hr up to 60,000 lbs/hr: $E = 3.59P^{0.62}$

Where E = rate of emissions in lbs/hr, and

P = process weight in tons/hr

Compliance Demonstration Method:

The affected facilities are assumed to be in compliance with the particulate mass emissions as long as the filter systems are operated and maintained in accordance with the manufacturer's specification and filters are in place at all times when the affected facilities are in operation.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- (ii) 401 KAR 59:010, Section 3(1) limits visible emissions from each affected facility to less than 20% opacity.

Compliance Demonstration Method:

The permittee shall perform a qualitative visual observation of the opacity of emissions from the affected facilities on a weekly basis and maintain a log of the observations. If visible emissions from the vents are seen (not including condensed water vapor within the plume) then the opacity shall be determined by Reference Method 9. If emissions are in excess of the applicable opacity limit, then an inspection shall be initiated of control equipment for all necessary repairs.

3. Testing Requirements:

Testing shall be conducted at such times as may be required by the Cabinet in accordance with Regulations 401 KAR 59:005 Section 2(2) and 401 KAR 50:045 Section 4.

4. Monitoring Requirements:

- (a) The permittee shall monitor raw material (ex: virgin pellets and recyclable polypropylene) usages of resins processed and plastic produced as necessary to demonstrate compliance with all requirements of this permit.
- (b) The permittee shall inspect filter(s) on a weekly basis. Filters shall be replaced when determined to be ineffective (through visual inspection).
- (c) The permittee shall inspect the affected facilities whenever operating problems are noted and routinely (at least once per month).

5. Recordkeeping Requirements:

- (a) Monthly records of the usage of each resin shall be maintained.
- (b) Monthly records of the tons of plastic produced shall be maintained.
- (c) Records of the qualitative visual observation including date and time, any necessary Method 9 readings and/or equipment repairs shall be maintained.
- (d) A log of filters' weekly observation shall be maintained.

6. Reporting Requirements:

See General Conditions Section C (3)

SECTION C - GENERAL CONDITIONS

1. Administrative Requirements

- a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:040, Section 3(1)(b) and is grounds for enforcement action including but not limited to the termination, revocation and reissuance, or revision of this permit.
- b. This permit shall remain in effect for a fixed term of ten (10) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division. [401 KAR 52:040, Section 15]
- c. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-11 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- d. Pursuant to materials incorporated by reference by 401 KAR 52:040, this permit may be revised, revoked, reopened, reissued, or terminated for cause. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance shall not stay any permit condition [Section 1a-4, 5, of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- e. This permit does not convey property rights or exclusive privileges [Section 1a-8 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- f. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:040 Section 11(3)].
- g. All previously issued permits to this source at this location are hereby null and void.

SECTION C - GENERAL CONDITIONS (CONTINUED)**2. Recordkeeping Requirements**

- a. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of at least five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [401 KAR 52:040 Section 3(1)(f) and Section 1b-IV-2 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- b. The permittee shall perform compliance certification and recordkeeping sufficient to assure compliance with the terms and conditions of the permit. Documents, including reports, shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

3. Reporting Requirements

- a. (1) In accordance with the provisions of 401 KAR 50:055, Section 1, the permittee shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
 - i. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - ii. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
- (2) The permittee shall promptly report deviations from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Reporting Requirement condition a.(1) above), the probable cause of the deviation, and corrective or preventive measures taken; to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report [Section 1b-V-3 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- b. The permittee shall furnish information requested by the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the permit [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].

SECTION C - GENERAL CONDITIONS (CONTINUED)

- c. Summary reports of monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation. The summary reports

are due January 30th and July 30th of each year. All deviations from permit requirements shall be clearly identified in the reports. All reports shall be certified by a responsible official pursuant to 401 KAR 52:040, Section 21.

4. Inspections

In accordance with the requirements of 401 KAR 52:040, Section 3(1)(f) the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times. Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency:

- a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation.
- b. To access and copy any records required by the permit.
- c. Inspect, at reasonable times, any facilities, equipment (including monitoring and pollution control equipment), practices, or operations required by the permit.
- d. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

5. Emergencies/Enforcement Provisions

- a. The permittee shall not use as defense in an enforcement action, the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing State-Origin Permits* incorporated by reference in 401 KAR 52:040 Section 23].
- b. An emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
 - (1) An emergency occurred and the permittee can identify the cause of the emergency;
 - (2) The permitted facility was at the time being properly operated;
 - (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and

SECTION C - GENERAL CONDITIONS (CONTINUED)

- (4) The permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division within two working days after the time when emission limitations were exceeded due to the emergency and included a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
- c. Emergency provisions listed in General Condition 5.b are in addition to any emergency or upset provision contained in an applicable requirement [401 KAR 52:040, Section 22(1)].
- d. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [401 KAR 52:040, Section 22(2)].

6. Compliance

- a. Periodic testing or instrumental or non-instrumental monitoring, which may consist of record keeping, shall be performed to the extent necessary to yield reliable data for purposes of demonstration of continuing compliance with the conditions of this permit. For the purpose of demonstration of continuing compliance, the following guidelines shall be followed:
 - (1) Pursuant to 401 KAR 50:055, General compliance requirements, Section 2(5), all air pollution control equipment and all pollution control measures proposed by the application in response to which this permit is issued shall be in place, properly maintained, and in operation at any time an affected facility for which the equipment and measures are designed is operated, except as provided by 401 KAR 50:055, Section 1.
 - (2) All the air pollution control systems shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers. A log shall be kept of all routine and nonroutine maintenance performed on each control device. Daily observations are required during daylight hours of all operations, control equipment and any visible emissions to determine whether conditions appear to be either normal or abnormal. If the operations, controls and/or emissions appear to be abnormal, the permittee must then comply with the requirements of Section C – General Conditions, 3.a.(2), of this permit.
 - (3) A log of the monthly raw material consumption and monthly production rates shall be kept available at the facility. Compliance with the emission limits may be demonstrated by computer program, spread sheets, calculations or performance tests as may be specified by the Division [401 KAR 50:055, Section 2].
- b. Pursuant to 401 KAR 52:040, Section 19, the permittee shall certify compliance with the terms and conditions contained in this permit by January 30th of each year, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an approved alternative) to the Regional Office listed on the front of this permit in accordance with the following requirements:
 - (1) Identification of the term or condition;
 - (2) Compliance status of each term or condition of the permit;
 - (3) Whether compliance was continuous or intermittent;
 - (4) The method used for determining the compliance status for the source, currently and over the reporting period, and

SECTION C - GENERAL CONDITIONS (CONTINUED)

- (5) For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.
- (6) The certification shall be postmarked by January 30th of each year. Annual compliance certifications shall be mailed to the following addresses:

Division for Air Quality	Division for Air Quality
Frankfort Regional Office	Central Files
663 Teton Trail	803 Schenkel Lane
Frankfort, KY 40601	Frankfort, KY 40601-1403
- c. Permit Shield - A permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with all:
 - (1) Applicable requirements that are included and specifically identified in this permit; or
 - (2) Non-applicable requirements expressly identified in this permit [401 KAR 52:040, Section 11].

7. Construction Requirements:

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, emission points 02 (2 Rotational Molding Machines and 2 NG Heaters) in accordance with the terms and conditions of this permit.

- a. Pursuant to 401 KAR 52:040, Section 12(3), unless construction is commenced on or before 18 months after the date of issuance of this permit, or if construction is commenced and then stopped for any consecutive period of 18 months or more, or is not completed within a reasonable timeframe, then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon a written request, the Cabinet may extend these time periods if the source shows good cause.
- b. Pursuant to 401 KAR 52:040, Section 12(4)(a) and 401 KAR 59:005, General provisions, Section 3(1), within 30 days following construction commencement, within 15 days following start-up and attainment of maximum production rate, or within 15 days following the issuance date of this permit, whichever is later, the owner and/or operator of the affected facilities specified on this permit shall furnish to the Regional Office listed on the front of this permit, with a copy to the Division's Frankfort Central Office, the following:
 - (1) Date when construction commenced.
 - (2) Start-up date of each of the affected facilities listed on this permit.
 - (3) Date when maximum production rate was achieved.
- c. Operation of the affected facilities authorized by this permit shall not commence until compliance with applicable standards specified herein has been demonstrated in accordance with the requirements of 401 KAR 52:040, Section 12(4)(b). Until compliance is demonstrated, the source may only operate for the purpose of demonstrating compliance.

SECTION D - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:040, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to an opacity standard shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspection, evaluation, and any corrective action shall be recorded in a log.

<u>Description</u>	<u>Generally Applicable Regulation</u>
1. CVF 01 Central Vacuum System and filtration System for Building 3 (Nilfisk Model CV 18, 740CFM)	NA
2. Laboratory and Product Testing Activities Building 2	NA